Abstract

Objectives: The integration of oral health and primary care in the United States (U.S.) is a national priority; yet, little is known about the current state of oral health and primary care integration in health professions’ education. The objectives of this study were to assess oral health integration in U.S. nurse practitioner (NP) programs; and examine factors that influence integration and satisfaction with graduates’ level of competence.

Methods: A 19-item, self-administered survey was distributed to 466 NP program directors.

Results: A total of 230 NP program directors responded (49%). Results of forward stepwise logistic regression models suggest that oral health programs were 49% less likely to have four or more hours of oral health curriculum (OR=0.51; 95% CI=0.34 – 0.77) and 57% less likely to be satisfied with graduates’ current level of competence (OR=0.43; 95% CI=0.28 – 0.68) compared to family medicine programs. Significant factors that promote integration were presence of a faculty champion (OR = 4.13; 95% CI=1.78 – 9.35), routine teaching by a dental professional (OR=6.67; 95% CI=2.64 – 16.97), and use of any evaluation method to evaluate students’ level of competence (OR=4.92; 95% CI=1.82 – 13.31). Significant factors that promote satisfaction with NP graduates’ level of competence were support for oral health (OR=3.16; 95% CI=1.52 – 6.57), routine teaching by a dental professional (OR=4.92; 95% CI=1.82 – 13.31), routine teaching by a non-dental oral health expert (OR=2.12; 95% CI=1.14 – 9.69). Significant factors that promote satisfaction with NP graduates’ level of competence were department support for oral health (OR=3.16; 95% CI=1.52 – 6.57), routine teaching by a dental professional (OR=4.92; 95% CI=1.82 – 13.31), and use of any evaluation method to evaluate students’ level of competence (OR=4.92; 95% CI=1.82 – 13.31). Significant factors that promote satisfaction with NP graduates’ level of competence were department support for oral health (OR=3.16; 95% CI=1.52 – 6.57), routine teaching by a dental professional (OR=4.92; 95% CI=1.82 – 13.31), and use of any evaluation method to evaluate students’ level of competence (OR=4.92; 95% CI=1.82 – 13.31).

Conclusions: Current levels of oral health education and satisfaction with graduates’ competence varies across NP specialty areas, and are associated with significant influencing factors.

Methods

Participants: Program directors (N = 459) from the following NP programs:

- Family NP (n = 252)
- Pediatric NP (n = 74)
- Adult-Gerontology Primary Care NP (n = 133)

Survey Instrument:

- 19-item, self-administered survey
- 13 questions about oral health training (e.g., hours and days of training, curricular topics, etc.), the presence of dental professionals in teaching curricular components, the awareness and use of existing educational resources, barriers to inclusion of OH curriculum, evaluation methods of learner’s OH competence, attitude towards OH integration in primary care and primary care, and satisfaction with learner’s OH competence.
- 5 demographic questions plus 1 question requesting permission to contact for a follow-up study.

Procedures:

- Survey disseminated by email between February and June, 2017 through a web-based survey application (SurveyMonkey).
- Initial cover letter sent one week in advance of survey distribution. Letter described the study’s purpose, its voluntary nature, and the anonymity of respondents.
- Four follow-up reminders were sent at three-week intervals as recommended by Dillman’s Total Design Method.

Data Analysis:

- Descriptive, univariate, bivariate statistics; and forward stepwise logistic regression models were employed.
- Significance set at alpha = .05.

Results

Connection with dental institution/program/oral health expert:

- 82% - no formal relationship with a dental school/residency, or dental hygiene program.
- 17% - routine teaching from a dental professional.
- 33% - routine teaching from a non-dental oral health expert.

Evaluation Methods for OH Competency Assessment by NP Program:

- Note
- Review-of-clinical documentation
- Direct observation in clinical setting
- Simulation experiences
- OSCE or equivalent
- Written/Computer testing
- Oral health training related to dental residency
- Laparoscopic training
- Pediatric emergency medicine training
- Likert scales
- Oral health training related to dental residency
- Laparoscopic training
- Pediatric emergency medicine training
- Likert scales

- Presence of a faculty OH champion was a key factor influencing integration.
- Programs with a faculty champion were significantly more likely to provide > 7 hours of OH curriculum (X² = 14.67; p < .001); evaluate students on their OH competencies (X² = 4.92; p = 0.03); cover IPE with an OH component (X² = 26.84; p < .001); and be satisfied with graduates’ level of OH competence (X² = 10.97; p = .001).
- Programs with a faculty OH champion were significantly more likely to use objective structured clinical examinations (X² = 5.03; p = 0.02); simulations (X² = 6.19; p = 0.01); or direct observation (X² = 9.58; p = 0.002).